



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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March 2, 2000

Mark Willes  
BMW Stone  
7125 South 300 East  
Midvale, Utah 84047

Re: Initial Review of Notice of Intention to Commence Large Mining Operations, BMW Stone Inc.(BMW), Brown's Canyon Rock Quarry Mine, M/043/021, Summit County, Utah

Dear Mr. Willes:

The Division has completed a review of your draft Notice of Intention to Commence Large Mining Operations (NOI-LMO) for the Brown's Canyon Rock Quarry, located in Summit County, Utah, which was received December 9, 1999. After reviewing your submission, the Division found several minor issues which need to be resolved before tentative approval may be granted (see attached review). To resolve these minor issues, we have listed several conditions which will enable us to proceed to tentative approval. Please review these conditions and provide a written response accepting or rejecting all five conditions. Also, please examine the attached review comments and include a response to these comments in your reply.

The following are the list of conditions to be resolved in the December 1999 NOI-LMO submission:

Condition #1:

BMW agrees to provide the Division with the results of a vegetation survey on or before June 30, 2000. The current disturbed area will not expand beyond the current 6.5 acres until this data is submitted and accepted by the Division.

Condition #2:

BMW agrees to provide the results of a soil survey and a lab analysis of the soil on or before June 30, 2000. This lab analysis will need to include: pH, texture, Electrical Conductivity, SAR (Sodium Absorption Ratio), % Organic Matter, CEC (cation exchange capacity), Total nitrogen, Nitrate nitrogen, Phosphorus (as  $P_2O_5$ ), and Potassium (as  $K_2O$ ). The disturbed area will not expand beyond the current 6.5 acres until this data is submitted and accepted by the Division.

Page 2  
Mark Willes  
M/043/021  
March 2, 2000

Condition #3:

BMW agrees to provide a revegetation species list on or before June 30, 2000. Attached is a recommended list which you may accept. If this mix is acceptable, please make it part of your plan. If this is not acceptable to BMW, you may propose a seed mix that will meet the reclamation goals of a permanent, diverse cover capable of supporting the post mining land use of grazing and wildlife habitat, which will be subject to review and approval before the Division can issue tentative approval.

Condition #4:


BMW agrees to commit to redistributing one (1) foot of soil over the disturbed areas as part of final reclamation. If this is not acceptable, you may propose an alternative plan for topsoil depth and/or amendments which would be expected to provide for successful revegetation, which will be subject to review and approval before the Division can issue tentative approval.

Condition #5:

BMW agrees that if the operation will impact the drainage to the west, they will provide a remediation plan to address these impacts prior to affecting the drainage. The drainage should not be impacted until the Division approves of the remediation plan.

Please reply to this letter by March 17, 2000. The Division will suspend further review of the Brown's Canyon Rock Quarry NOI-LMO until your response to this letter is received. If you have any questions in this regard please contact me, Lynn Kunzler, Doug Jensen or Tom Munson of the Minerals Staff. If you wish to arrange a meeting to sit down and discuss this review, please contact us at your earliest convenience. Thank you for your cooperation in completing this permitting action.

Sincerely,

  
for Anthony A. Gallegos  
Acting Permit Supervisor  
Minerals Regulatory Program

jb  
Attachment: Review  
cc: Lesley Burns, Summit County Planning  
M43-21.rvw

## **REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS**

BMW Stone Inc. Company  
Brown's Canyon Rock Quarry Mine

M/043/021

### **R647-4-106 - Operation Plan**

#### **106.5 Existing soil types, location, amount**

The operator intended to have a soil survey performed as weather conditions permit. In addition, a soil analysis of the soil material proposed for reclamation will need to be provided. The following parameters will need to be analyzed to make a final determination as to the type and rates of fertilizer and or other amendments will be needed for reclamation. (LK)

- |                               |                                    |
|-------------------------------|------------------------------------|
| 1. pH,                        | 2. texture,                        |
| 3. Electrical Conductivity,   | 4. SAR (Sodium Absorption Ratio),  |
| 5. % Organic Matter,          | 6. CEC (cation exchange capacity), |
| 7. Total nitrogen,            | 8. Nitrate nitrogen,               |
| 9. Phosphorus (as $P_2O_5$ ), | 10. Potassium (as $K_2O$ );        |

#### **106.6 Plan for protecting & redepositing soils**

The NOI does not provide a plan for redepositing soils. For surety calculation purposes one (1) foot of soil was estimated to be respread with a dozer. This amount is available within the area identified in the NOI as topsoil storage. All push distances would be less than 300 feet. (DJ)

#### **106.7 Existing vegetation - species and amount**

The operator intends to conduct a vegetation survey of the surrounding vegetation as soon as weather conditions permit. (LK)

### **R647-4-107 - Operation Practices**

#### **107.5 Suitable soils removed & stored**

See comments under R647-4-106.5

### **R647-4-109 - Impact Assessment**

#### **109.1 Impacts to surface & groundwater systems**

The plan does not address any occurrence of surface and ground water. There is an ephemeral drainage near the waste dump as shown on the USGS Quad. Therefore, a permit condition is attached to the LMO. If the operation causes any impacts (diversions, sediment, or blockage) to the ephemeral drainage the operator will have to submit a remediation plan to deal with any impacts to the drainage. (TM)

Page 2  
Initial Review  
M/043/021  
March 2, 2000

**R647-4-110 - Reclamation Plan**

110.5    Revegetation planting program

The NOI does not contain a seed mix for revegetation. Attached is a recommended seed mix, which will need to be made a part of the plan, if acceptable to BMW. Otherwise, BMW will need to provide a seed mix that is expected to meet the reclamation goals of a permanent, diverse cover capable of supporting the post mining land use of grazing and wildlife habitat.  
(LK)

**R647-4-111 - Reclamation Practices**

111.12    Topsoil redistribution

See comments under R647-4-106.6

**R647-4-113 - Surety**

The amount of reclamation surety acceptable to the Division is \$25,000 (see attached estimate). The Division holds a \$12,900 interim surety in the form of a Certificate of Deposit (CD) for this site. BMW will need to post a new surety, or revise the existing CD. A new Reclamation Contract will also need to be submitted.

Attachments: Seedmix, Surety Estimate

Recommended Revegetation Species List  
for

BMW Stone, Inc.  
Brown's Canyon Rock Quarry

M/043/021

<u>Common Name</u>	<u>Species Name</u>	<u>*Rate lbs/ac (PLS)</u>
Thickspike wheatgrass	<u>Agropyron dasystachum</u>	2.0
Bluebunch wheatgrass	<u>Agropyron spicatum</u>	2.0
Intermediate wheatgrass	<u>Agropyron intermedium</u>	1.0
'Piute' orchard grass	<u>Dactylis glomerata</u>	0.5
Basin Wildrye	<u>Elymus cinereus</u>	2.0
Ladac Alfalfa	<u>Medicago sativa</u>	1.0
Yellow sweetclover	<u>Melilotus officinalis</u>	0.5
Rocky mountain penstemon	<u>Penstemon strictus</u>	0.5
Small burnet	<u>Sanguisorba minor</u>	1.5
Mountain big sagebrush	<u>Artemisia tridentata vaseyana</u>	0.1
Serviceberry	<u>Amelanchier alnifolia</u>	1.0
Forage kochia	<u>Kochia prostrata</u>	0.5
Bitterbrush	<u>Purshia tridentata</u>	1.0
Total		13.6 lbs/ac

Recommended broadcast seeding rate.  
If the seed is to be drilled, decrease rate by 1/4.

Last revised: 2/28/00  
m43-21.sdm

# RECLAMATION SURETY ESTIMATE

BMW Stone

Browns Canyon Stone Quarry

M/043/021

Prepared by Utah State Division of Oil, Gas & Mining

last revision

10/12/98

filename M043/021.WB2

page "estimate D8"

Summit County

-This estimate uses a D8 size dozer for most earthwork

Note: actual unit costs may vary according to site conditions last unit cost update 08/25/99

-Amount of disturbed area which will receive reclamation treatments = 9.1 acres

-Estimated total disturbed area for this mine = 9.1 acres

Activity	Quantity	Units	\$/unit	\$	Note
Safety gates, signs, etc. (mtls & installation)	1	sum	200	200	(1)
Demolition of buildings & facilities	2000	CF	0.25	500	(2)
Debris & equipment removal - trucking	2	trips	48	96	(3)
Debris & equipment removal - dump fees	10	ton	55	550	(4)
Debris & equipment removal - loading trucks w/FE loader	2	hours	176	352	(5)
Demolition & debris removal - general labor	10	hours	15	150	(6)
Regrading facilities areas (1 ft depth)	0.0	acre	470	0	(7)
Regrading waste dump slopes	15,000	CY	0.47	7,050	(8)
Ripping waste dump tops	9.1	acre	220	2,002	(9)
Ripping stockpile & compacted areas	0.0	acre	220	0	(9)
Ripping pit floors	0.0	acre	220	0	(9)
Ripping pit access roads	0.0	acre	220	0	(9)
Creating safety berms or barriers around highwalls	0	LF	0.15	0	(10)
Ripping access roads - dozer	0.0	acre	220	0	(9)
Regrading access roads - dozer	0.0	acre	470	0	(7)
Sidecast mtl replacement on steep roads- trackhoe	0	LF	0.85	0	(11)
Surface drainage restoration or construction	0	LF	0.15	0	(10)
Topsoil replacement - dozer	6000	CY	0.47	2,820	(12)
Topsoil replacement - scraper	0	CY	1.05	0	(13)
Topsoil replacement - truck & FE loader	0	CY	2.55	0	(14)
Mulching (2 ton/acre alfalfa)	0.0	acre	160	0	(00)
Fertilizing ( 100 lb/acre diammonium phosphate)	0.0	acre	90	0	(00)
Composted manure (5 ton/acre)	9.1	acre	150	1,365	(00)
Broadcast seeding	9.1	acre	170	1,547	(00)
Drill seeding (~13 lb/acre)	0.0	acre	150	0	(00)
Hydroseeding	0.0	acre	800	0	(00)
General site cleanup & trash removal	5.0	acre	50	250	(00)
Equipment mobilization	1	equip	1000	1,000	(00)
Reclamation Supervision	4	days	372	1,488	(15)
		Subtotal		19,370	
10% Contingency				1,937	
		Subtotal		\$21,307	
Escalate for 5 years at 3.27% per yr				3,719	
		Total		\$25,026	
Rounded surety amount in yr 2004-\$				\$25,000	
Average cost per disturbed acre =				\$2,747	

**GENERIC RECLAMATION EST****BMW Stone****Browns Canyon Stone Quarry****M/043/021****Prepared by Utah State Division of Oil, Gas & Mining**

last revision

12/01/97

filename M/043/021.WB2

page "estimate D8"

**Summit County****last unit cost update****08/25/99****Note**

- (1) DOGM lump sum assumed
- (2) Means Heavy Construction Cost Data 1998, 020-604-0100, mixture of bldg. types, average, excluding dump fees
- (3) Means 1998, 020-620-5100, \$0.48/mile for >8CY truck; assumed 100 miles round trip
- (4) Means 1998, 020-612-0100, dump charges, typical urban city, tipping fees only, bldg construction mtls
- (5) Rental Rate Blue Book 4/98, Cat 988B, 7CY, & Means 1998, Crew B-10U, loading trucks only
- (6) DOGM assumed wage for unskilled general labor
- (7) Means 1998 & Rental Rate Blue Book 4/98: Cat D8N, U, mtl 2550 lb/CY, 50 ft push, 1 ft depth
- (8) Means 1998 & Rental Rate Blue Book 4/98: Cat D8N, U, mtl 2550 lb/CY, 100 ft push
- (9) Means 1998 & Rental Rate Blue Book 4/98: Cat D8N, U, multi shank rippers, speed 1.0 mph
- (9) Means 1998 & Rental Rate Blue Book 4/98: Cat D8N, U, multi shank rippers, speed 1.0 mph
- (9) Means 1998 & Rental Rate Blue Book 4/98: Cat D8N, U, multi shank rippers, speed 1.0 mph
- (9) Means 1998 & Rental Rate Blue Book 4/98: Cat D8N, U, multi shank rippers, speed 1.0 mph
- (10) Means 1998 & Rental Rate Blue Book 4/98: Cat D8N, U, mtl 2550 lb/CY, 50 ft push, avg vol 0.5CY/LF-berm assumed
- (9) Means 1998 & Rental Rate Blue Book 4/98: Cat D8N, U, multi shank rippers, speed 1.0 mph
- (7) Means 1998 & Rental Rate Blue Book 4/98: Cat D8N, U, mtl 2550 lb/CY, 50 ft push, 1 ft depth
- (11) Contractor's actual costs, 1991 at E/053/012, Cat 225 Excavator, 20 ft wide road
- (10) Means 1998 & Rental Rate Blue Book 4/98: Cat D8N, U, mtl 2550 lb/CY, 50 ft push, avg vol 0.5CY/LF-berm assumed
- (12) Means 1998 & Rental Rate Blue Book 4/98: Cat D8N, U, mtl 2550 lb/CY, 100 ft push
- (13) Means 1998 & Rental Rate Blue Book 4/98: Cat 627F P-P, mtl 2550 lb/CY, 2,000 ft haul one-way, grade +/- 4%,
- (14) Means 1998 022-266-2030: hauling excavated or borrow material, off highway hauler, 22 CY, 1 mile round trip
- (00) DOGM general estimate - mulching
- (00) DOGM general estimate - fertilizing
- (00) DOGM general estimate - manure \$16/ton delivered, \$14/acre spreading
- (00) DOGM general estimate - broadcast seeding
- (00) DOGM general estimate - drill seeding
- (00) DOGM general estimate - hydroseeding
- (00) DOGM general estimate - site cleanup & trash removal
- (00) DOGM general estimate - equipment mobilization
- (15) Means 1998, 010-036-0180, project manager, minimum \$1,815/wk